

## COALING STATIONS.

The English Opinion of Their Importance in the Navy.

While not essential to the Maintenance of Naval Power These Stations are Fortified Against the Ships of Foreign Nations.

Sailing ships could, and did, remain at sea for many months at a time. Lord Nelson writes in the Nineteenth Century. Their power to remain at sea was only limited by the amount of water that they carried. The period during which a modern ship of war can remain at sea is determined mainly by her coal endurance, and to a great extent by the necessity of effecting repairs in port to delicate machinery. The coal endurance of modern ships of war is even more limited than official figures, so far as any are available, lead us to suppose; and when Lord Salisbury placed the limit of the steaming distance of a ship of war at two thousand miles—viz., the distance at which she could deliver a blow and return to her port—he certainly did not underestimate her power. The country which possesses the most numerous coaling stations and the best situated as regards trade routes will have a great advantage in a future war. In this respect the British empire is without a rival.

While a navy depends for its power of operating in distant waters very largely on coaling stations, the existence of the latter depends absolutely on the power of the fleet to protect them. No local force, whether in fortifications or men, will preserve them to a power which has lost the command of the sea. The history of Malta during the great war affords an admirable instance of the interdependence of fleets and coaling stations. Though it must be admitted that the lesson to be drawn is to some extent weakened by the need of modern ships for coal.

Many people consider that the possession of Malta is indispensable to the maintenance of British influence in the Mediterranean. How far this is true may be judged from the fact that when Malta was in the hands of the French, and that Malta fell into our hands, though not for some time, as the direct consequence of that battle, which gave us the command of the Mediterranean. Capt. Mahan summarizes the conclusions which should be drawn in these words: "Its fate when in the hands of France . . . gives warning that the fleet depends on Malta as much as the fleet on the fleet." This is true of coaling stations which do not lie in such proximity to the ports of foreign countries.

We have acted wisely in giving to our coaling stations sufficient armament against one or two hostile cruisers. More than this is not required. As long as our navy is maintained at its proper strength, and is efficiently officered and manned, it should not be expected for a serious expedition to leave the enemy's ports without a British fleet being immediately in pursuit.

## AHEAD OF ERICSSON.

An Austrian Sloop has Just Invented the Modern Screw Propeller.

The Austrians have been celebrating the centenary of Joseph Ressel, one of the many claimants to the honor of being the inventor of the screw propeller, by a festival in front of his statue in the Polytechnic Institute of Vienna. It is said that Ressel, who died in poverty and neglect in 1857, described his plan for using the Archimedes' screw for propelling ships as long ago as 1812, but it was not until 1829 when all his earlier patents had lapsed, that he succeeded in interesting a Trieste merchant, Fontana, in his device, and securing a trial for it on board a small steamer called the Cidetia. Unluckily for him one of his steam pipes burst, and the authorities thereupon refused him all further experiments. Poor Ressel was derided on all sides, and was asked whether he wished to be hanged by the gallows. The French Post says there is no doubt that he was a genius in his way, or that he, in common with many other great inventors, was on the principle of the screw for some years before Ericsson obtained his patent in 1826. John Bourne, in his treatise on the screw propeller, describes one hundred and twenty-six different inventions, but does not even mention the name of Ressel, although a monument to the memory of the latter had been erected already in Vienna. Ericsson's plan for a patent was contested stoutly in the English law courts, but he was able to prove that the only propeller in use before 1834 was the Archimedes screw, and one with arms like the vane of a smokejack. Capt. Deane, a French engineer, recommended a screw propeller to the ministry of marine as early as 1823. But the Austrian inventor must have been a remarkable man, for in the list of his inventions, which perished for want of money, may be found ideas for a submarine, pneumatic tube, iron ribs for ships and bent wood for furniture.

## Extinction of Alligators.

Alligators are the next animals to be in danger of complete extermination at the hands of reckless and mercenary hunters. There has been a great demand for alligator skin, which for purposes is estimated to be worth with even decent killing of the creatures the supply of this useful leather might be kept up indefinitely. Their extinction is close at hand is not surprising when we learn that three million have been killed in Florida since 1880, and that six hundred was at one time a fair week's work. As it is with the alligators, buffalo and seals, so it is with many species of southern birds which have been so recently slaughtered for their plumage that within a few years they will be extinct.

## SOILED PLAYING CARDS.

An Immense Traffic in the Discarded Bits of Pasteboard.

Onlookers in the cardrooms of clubs, gaming resorts and similar institutions have sometimes asked what became of the soiled playing cards after they were cast aside in such places, says the New York Herald. The number of new packs of cards called for in a fashionable club or a prosperous gambling house in the course of a month is enormous. A pack may be used through an entire evening, but frequently happens where high stakes are being played for that half a dozen new packs will be called for in a single game in the course of the night. As none but cards of excellent quality are used and as a player for stakes has a right to demand a fresh pack whenever his caprice or superstition prompts him, the keeper of a gambling house finds the cost of providing them a considerable item of his running expense.

What is done with the soiled cards? You may think the servants get them. Well, they do. There are about 400 in them, which in the course of a year in a city like New York or Chicago would amount to a considerable quantity. The cards that have been used are carefully saved and sold to a regular buyer, who contracts to take all the cards during the year. Some as to the cards are saved for him, and then resold to him. His customers are mostly second-hand dealers. The buyer, who conducts a regular business, sorts them, cleans them as well as he can, and then resells them. No local need, whether in fortifications or men, will preserve them to a power which has lost the command of the sea. The history of Malta during the great war affords an admirable instance of the interdependence of fleets and coaling stations. Though it must be admitted that the lesson to be drawn is to some extent weakened by the need of modern ships for coal.

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## NEW YEAR'S IN AFRICA.

The Impression of an Arabian of Doubtful Character.

Savage nations have many ideas in common with their civilized brethren. Dr. Junkin says that the African New Year wish is "A *zulu* name tab," meaning in Arabic jargon, "I am strong, and I am rich." This salutation the person saluted is expected to return some small gift. The doctor got rid of many of his visitors by taking out of their mouths, before they could utter it, their own greeting. But not all of them.

Last evening I experienced a masterpiece of Arab impression which is worthy of record. I had long been withdrawn to my bed and taken my simple evening meal, when a large Arabian lantern appeared before my door, followed by a crowd of men, and a tremendous "zein," which is a round Arabian waiter that serves as a dinner table.

## ONE OF THE LOST TRIBES.

A Strange Community in India and Their Scattered over the breezy downs of the Nilgiris, in little villages of stone and mud, that look at a distance like nothing in the world so much as a colony of bees. Live a community of six or seven hundred people, who are variously believed to be the descendants of one of the lost tribes of Israel, the aborigines of southern India, and a community of Malaysians. They believe in a strange deity and a hell, a dismal stream full of leeches, and this they must cross by means of a single thread. The soul burdened with sin is too heavy for this slender support and the sinner falls into the jaws of the demon. The thread sustains only the souls of the good. The funeral of a Toda, for that is the name of the shepherd tribe, is as old in its way as their religion. A written guarantee given for a year, and a small piece of gold, are the only tokens that are removed, clarified butter is smeared on the fragrant wood of the funeral pyre, and the body is burned to ashes and the ashes scattered to the four winds.

## Dangerous Road Making.

To cut a track through the high and precipitous mountains of north Queensland and the men are obliged to be hung in chains, and notwithstanding this precaution about fifty have lost their lives by losing their footing and being flung down one thousand feet into the chasm below. Twice the attempt to form this roadway has been abandoned, but the contractors have addressed themselves to the work.

## THE CHIMP.

Peruvian and Bolivian Indians Use a Queer Counting Device.

The chimps is a reckoning device still employed in some remote parts of Peru and Bolivia. It consists essentially of a certain number of cords of different colors, and the shells of various fruits. These balls can be strung all at the same time on all the cords or upon a certain number only.

The Indian, says the New York Journal, thinks a means of counting numbers corresponding in our process to as many columns as there are cords of the apparatus. If, as it happens, moreover, the native calculator decides that the balls strung a single time shall represent a number, then through which two cords pass shall be equal tens, etc., he will be able to represent any number whatever. The will figure, for example, the figure 450 by stringing 6 balls on one cord, 5 on two cords, 4 on three cords and 4 on four cords. The little instrument once tied at the lower extremity, as it was previously at the top, will definitely preserve the equality of the number which will have been confided to it.

We see in this curious reckoning device of the present Indians a survival and a simplified adaptation of the old quipus or cords with knots of various colors in the past, the places of writing, which belonged to the Incas, and were distributed in accordance with the degree of the tribulation, and final discharge granted in both cases.

## LIVING LANTERNS IN THE SEA.

The "Midshipman" and its Tons of Shining Phosphorescent Lanterns of the Ocean have been living lanterns of the sea. A queer fish called the "midshipman" carries the brightest and most striking of all the sea's torches. Along its back, under a transparent base of fins there are small disks that glow with a clear phosphorescent light like rows of shining buttons on the young midshipman's uniform. In this way it gets the name of "midshipman," by which young sailors in the navy are often called. The fish has small ball-eye lanterns, with regular lenses and reflectors. The lenses gather the rays and the reflectors throw them out again. There is a layer of phosphorescent cells between the two and the entire effect is as if the fish were a living lantern.

Many of the older churches in England and western Europe have jugs or jars imbedded in their walls, the mouths opening into the interior. For a long time the openings were supposed to be holes in the walls, but a closer examination a number of years ago, on one of the towers of a patent building, disclosed the fact that the openings were the necks of jugs. Most of the old churches have been built in the eleventh to the seventeenth centuries have them, and in some they are present in great numbers. These jugs, which have been used for a variety of purposes, are variously believed to be the descendants of one of the lost tribes of Israel, the aborigines of southern India, and a community of Malaysians.

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## LEGAL.

FINAL REPORT OF EX-PUBLIC ADMINISTRATOR D. M. WALTERS.

TO THE HON. W. H. VIDEN, JUDGE OF THE COUNTY OF MONO, STATE OF CALIFORNIA.

D. M. WALTERS, EX-PUBLIC ADMINISTRATOR OF THE COUNTY OF MONO, STATE OF CALIFORNIA, respectfully submits the following Final Report of his administration, and of his term of office, ending January 1st, 1900.

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